

546.d.25

X 3

AN

ENTIRE NEW
T R E A T I S E
ON
L E E C H E S,

WHEREIN THE
NATURE, PROPERTIES, AND USE OF THAT MOST
SINGULAR AND VALUABLE REPTILE, IS
MOST CLEARLY SET FORTH.



By GEORGE HORN,
APOTHECARY, &c.



L O N D O N :

Printed for and Sold by the AUTHOR, corner of Leonard Street,
facing the Tabernacle, Moorfields; by H. D. SYMONDS, No.
20, Paternoster-row; and by J. COLLINS, No. 53, Bishop's
gate Street, Within.

1798.

Price ONE SHILLING and SIXPENCE.]

[Entered at Stationers Hall.]

THE
JOURNAL OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE

VOLUME 32

PART 1
1902
LONDON
PUBLISHED BY THE
Royal Society of London
at the Royal Society's Office,
1, BEDFORD SQUARE, W.C.

PRINTED BY
HARRISON AND SONS, ST. MARTIN'S LANE, W.C.

THE
JOURNAL OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE
CONTAINS
ORIGINAL RESEARCHES
AND
REVIEWS OF LITERATURE
RELATIVE TO
HUMAN PHYSIOLOGY
AND ETHNOLOGY

1902
LONDON
PUBLISHED BY THE
Royal Society of London
at the Royal Society's Office,
1, BEDFORD SQUARE, W.C.

P R E F A C E.

IT may be enquired how I came to think of writing upon this subject? To this I answer, that, being convinced of the need thereof, nothing wrote (of any moment) upon this head, being extant, and having gained a small stock of experience, I was desirous of communicating it for the benefit of mankind.—I have made diligent search for some useful and intelligent account of Leeches, but found none, either ancient or modern; and how creatures, so singular in their nature and properties, so eminently useful, and so very valuable, should have been so long and intirely neglected, in this respect, I am much surprised. I was also particularly led to make this attempt from a consideration of the wants and penury of the poor, whose circumstances will not (in many instances) admit their calling in medical aid when
wanted,

wanted, this Treatise may be of some use to them in this respect, they will thereby, in many instances, be able to be their own physicians, and administer relief to their families. Other incitements arose from the consideration of the general ignorance which prevails amongst mankind respecting the most proper and effectual mode of application. For the better information of the Reader, I have divided this Treatise into Sections, and treated upon each part separately. In the first section I have shewn the different species of leeches, and how to distinguish the genuine from the spurious. In the second section I have given a description of the nature and constitution of this wonderful reptile, wherein the wisdom of the great Creator is eminently displayed in the particular formation of this creature.

In section third I have informed the Reader how so useful a creature may be preserved and kept healthy and fit for use for a great length of time; and, as they are often remarkably dear, and hardly to be obtained at certain periods of the year, particularly in the winter season; I deem it an object worthy of a person's attention to purchase a few leeches while plentiful and cheap, to keep in readiness. In section four, I have treated upon some of the most general cases

cases which require the agency of leeches, or were their usefulness is particularly experienced, and for the better information of the enquirer in this respect have been explicit, and left him a clue whereby he may find his way without perplexity or puzzle. In the last section, I have given rules for the most effectual and speedy application of leeches, detected the inefficacy of some of the more general modes of applying them, and pointed out the perplexity of persons in such cases. Having given this brief account of the motives and object of the present undertaking, I leave it in the hands of a liberal public, conscious that the candid and judicious Reader will wink at the defects of the performance (it being entirely original), and will only look at the design of the author.

AN
ENTIRE NEW
T R E A T I S E
ON
L E E C H E S, &c.

SECTION I.

OF THE DIFFERENT SPECIES OF LEECHES.

THE leech is a terraqueous reptile, of the vermicular specie, as it is an inhabitant of both earth and water: they are to be met with in most counties in England, but particularly in Norfolk, were they are caught in great abundance, not only in shallow streams, but also in those stagnant waters that have a sandy bottom. The method of taking them is various in different parts, some will go bare legged into the waters, and after standing a few minutes, several leeches will be found adhering to the legs of the person, these being taken off, the same method is repeated till a sufficient number is obtained. This method, which is chiefly employed in India, I totally discountenance, as dangerous to a high degree. No doubt, an alarming inflammation of those depending parts, have often ensued from
the

the attachment of so great a number of leeches, under such circumstances. For, admitting the period of being in the water each time do not exceed the space of a minute, yet many of them must have penetrated, and even perforated the skin, which would occasion a partial revulsion to the surface, that being suddenly impelled by the application and ingress of the aqueous fluid, must occasion considerable obstruction of the parts, when the result might prove very pernicious to those of the most healthy habits: but, should it be a person of a scorbutic or scrophulous disposition, inveterate sores may be thereby occasioned, which would be very difficult of cure.

The method of catching them usually employed in England is, agitating the waters where they are contained, which occasions them to float upon the surface thereof, when with a net, made for the purpose, they are secured. Other methods are employed, which would be both tedious and unnecessary to relate.

There are four species of this creature, two of which are chiefly found in England, and claims our particular attention, and, therefore, we shall only just name the other two, which are, the snail leech and the broad tailed leech.

The horse leech is frequently found in ponds and hedge ditches, particularly in those round about London, they are usually from three to four inches in length, considerably flat, and about the thickness of a goose quill, their colour on the back is a dusky green, that on the belly of a brighter green. These leeches, it is said, will

will fix upon horses and other brute animals, from which they have derived their name. I have somewhere read of a foal, that by getting into a ditch were many of those reptiles were, so great a number attached themselves to the animal as to occasion its death. False report say, these leeches, when attached to the skin of a human being continues to gorge themselves with great greediness till they have imbibed a skin full, and then immediately discharge it by the anus, upon which they set to drawing with renewed avidity as before, still filling and emptying themselves without ceasing, and cannot be disengaged from the body without the utmost difficulty. But the truth is, they will not fasten on the skin of a man, consequently, all that is said concerning them, in this respect, is altogether false. The large brown leech is the only kind in use; they are in general from two inches to six, though they are capable of much greater extension and contraction: sometimes they are seen darting through the water with great swiftness, at which time they are very long, at other times they will contract themselves into a form almost round. They are much rounder in body than the horse leech, with a degree of taper towards each end,—their colour is black, and brown stripes on their backs, the belly is covered with dark brown, interspersed with light brown spots. In India, leeches are said to grow to an enormous size, were they much abound, to the great annoyance of the natives, who walking almost naked through the marshy grounds, are exposed to the attack of those animals. A story is related of a girl being alone, espied a soldier at some distance, who she thought meant to approach her, when, in order to escape his observa-

tion, ran and hid herself behind some bushes, surrounded by a swamp, filled with leeches; when so great a number fastened upon her, as to occasion her death.—The fear of the soldier, no doubt, being greater than the alarm caused by the leeches, she was thereby confined in her situation so long as to afford the leeches opportunity to make vast depredations upon the skin.

SECTION II.

OF THE PHYSIOLOGY OF LEECHES.

HAVING in the preceding section shewn the different species of leeches, and by what means the genuine kind may be distinguished from the rest, I shall, in this section, confine myself to the physiology or description of their nature and constitution. They are viviparous, bringing forth their young with all their powers, capable of acting in every respect in which this animal is distinguished. The time of fecundity is in the months of April and May, the latter end of August and September; the number of young ones a single leech brings forth in one year can hardly be ascertained, though it is very numerous; for when the leech catchers rob a pond of all large enough for use, if nothing happens to obstruct fecundation, in two years afterwards they will find it largely stored with abundance of fine leeches, and a much increased number of small ones; this is particularly found to be the case from the method which some country people have adopted to obtain leeches as an exclusive property. In order to this, they make a pond, near their house, about three feet deep, twenty wide, and thirty long, if they cannot conveniently form one with a sandy bottom, they make the pond a little deeper, in which they deposit a few loads of sandy earth: In this pond, when filled with water, they put their leeches, about

about April, and without any further trouble or expence, they obtain, at the proper season, a large supply of leeches.

They are at first very small, seldom exceeding the thickness of a common needle, but they grow fast, and arrive at their adult state in five or six months, their heads are small; the mouth consists of two thick lips, a small tongue, and three teeth. Their lips are particularly serviceable in sucking: immediately upon the application of these creatures to the skin, they apply their lips close to the part, when penetrating the skin, the lips hinder the smallest particle of blood from escaping; their tongue, I am persuaded, is the chief organ with which they imbibe the blood. They have no specific stomach for the reception of their food, but the whole space of their body seems to be occupied by pellucid receptacles, or bags, which are all saturated whenever they meet with nourishment suitable to their nature. Those intestine bags possess potent peristaltic motion, which is evidently to be observed when they are charging themselves with blood, for during the whole time of saturation the body is in almost constant motion in one part or other, from the head to the tail, and in general they are found to fill the whole length gradually, so that one receptacle or bag receives it and immediately transfers part to another, whereby the whole is filled nearly at the same time.

The wise and good Author of Creation has given wonderful displays of his wisdom and goodness to the meadest of his productions, which is very observable in
this

this part of the formation of leeches; for what danger and inconvenience they must have been exposed to, was it not for this construction. The blood, by means of this, undergoes a sort of rectification, when the most pure part is deposited in the extreme parts, whereas the grosser is reserved near the receiving part, and evacuated up, as containing something offensive to the animal.—Another thing, they are in a variety of respects exposed to external injury and pressure, whereas, if this separation of intestinal contents was not made, upon every contusion or squeeze, their blood would be thrown into a violent commotion, thereby producing a fermentation in it; hence coagulation and death would ensue. I have had frequent occasion of observing, when leeches have been applied to persons whose blood was in a tuff or vicious state, with what difficult efforts it was impelled by the animal into the remote parts, so much that notwithstanding the body was in the quickest motion of exertion, it was not till after repeated efforts that it was filtered through the pellucid partitions and conveyed to the extremity of the body.—Sometimes half the length of the leech would be swelled before the rest of the body received any of the blood, at other times the neck and towards the tail would be occupied without the middle.—But at length when the animal had drawn away a portion of glutinous crasamentum, upon more of the serum following, the leech filled itself with great facility.

When in their native abode they feed upon various insects which the water affords.—The body of the leech is composed of about one hundred elastic muscular divisions, or vertebræ, by which they dilate or contract themselves.

themselves at pleasure.—The blood which they imbibe, will lay some months, without undergoing any change, except a small degree deeper in colour.

Authors generally agree, that they have no anus, but whatever excremental diminution they may be the subjects of, it is only an exhalation through the pores of the cutis, through which they are also thought to respire.

As a proof they have pores in the skin through which the fluids pass, I emptied a number of those animals, into a tin cullender for the purpose of cleansing them, but though the holes of the cullender seemed much too little to admit the leeches through them, many of them insinuated themselves through the holes, and others that were larger, stuck by the middle, neither was it without great difficulty to myself and pain to them, they were extricated from their situation; while hanging in that predicament, they voided through the skin a considerable quantity of gummy fluid: and also when hanging to the skin (oftentimes) especially when nearly filled with blood, they will cast forth an aqueous fluid in copious effusion from their bodies.

SECTION

SECTION III.

OF THE METHOD OF KEEPING LEECHES, &c.

LEECHES may, with care, be preserved healthy and good for years, in pans:—during the summer season, not more than two hundred should be kept together, in winter double that number may with equal propriety. The vessel they are kept in should be an earthen pan, that will contain about three gallons of water, which should not be more than half filled with water, for I have found, by experience, that it is congenial to their nature for to have a place out of the water, which they may retreat to at pleasure, this is proved by their often hanging in clusters round the top of the pan.—From May till September their water should be changed at least every other day, in winter every fourth day. The best water for to keep them in is spring water, as being least disposed to putrescency. I have of late put a little moss amongst leeches, which practise I would recommend, for they are very much enamoured with it, perhaps from its resembling in some measure their native weeds, they creep through it, and by that means clear themselves of slime, which in the warm weather accumulates around them, and unless removed by timely changes of water, will be productive of disease. During hot weather they should be kept in as cool a place as possible, and in the winter season, place them where the
water

water may preserve that degree of warmth it possesses in summer; when you put fresh water to them during the cold weather, it should be deprived of that intestine coldness which it possesses at that season of the year, by warming it in the smallest degree. The leech, as has been before said, feeds upon insects in its native waters; but may be, as hinted, kept in only water for years, though they dwindle by keeping, they remain healthy, and will take with as much avidity as those recently taken from the waters, provided they are well attended to, with respect to changing their water agreeable to the rules laid down.

I, in the beginning of this Treatise observed, they were residents in the earth as well as water, for in the summer season when the ponds and waters are dry, which often happens, they retreat like a worm, from six inches to eight and upwards into the earth, where they remain till the autumnal rains, by replenishing those reservoirs with water, cause them to come forth from their subterraneous abode. They likewise make the earth their retreat in the winter season, to avoid the pernicious effects of cold and frost, were they lay torpid till the spring; hence it is that the seasons for catching them is only spring and autumn. By attending to what has been said, leeches may be kept from disease, but on the other hand, I have had occasion of observing that, neglecting to change the water for three or four days during very hot weather, a putrid complaint seized them, which presently swept off hundreds. In the commencement of this disease they lose their wonted vigor and natural powers of contraction, and when taken into
the

hand remains extended and stiff (for when in good health they always draw themselves up like a button when handled); the tail when thus diseased, appears flat and broad, in a few days they gradually become knotty, the blood, of which they always have a portion, becomes clotted and congealed within them, by the putrescency of the malady, and they soon fall victims to its virulence. I have taken out of a pan that has contained one hundred and fifty, or two hundred, fifteen or twenty, one morning after another, till the whole number died; and, indeed, such is the nature of this complaint, that when I see one infected, I look upon all the rest as lost. I have not yet been able to discover any specific means of curing this disease when manifest, nor prevent it being manifest and destructive to those that may once have imbibed the contaminated fluid.

However, I advise those who have the care of leeches, if they have been so negligent as to suffer this malady to attack them, as soon as they perceive it, to separate those that have the least appearance of stiffness or knottiness, from the rest, and lay each sort in a dry woollen cloth for the space of half an hour, then put them into separate pans with fresh water, this do twice a day, while the sickness remains; if this method fails, I know not what will do; however, as prevention, even were we know of a specific remedy, is always preferable to cure, so by a little care, this disease of so useful creature, may be prevented; but is seldom removed when once taken place. This singular little reptile, which possesses so many remarkable properties, designed for the use of man, deserves our warmest gratitude to our Supreme

C

Benefactor;

Benefactor : for in my estimation its worth and value is very great, and in many cases of the most threatening kind, I could not tell how to dispense with, or possibly find a substitute for it.

To me it has been of eminent service in my practice. That this little creature should, upon every occasion, attach itself to the human body, have a body itself calculated to receive its full of blood, which, upon application it charges; the peculiar kind of orifice it makes, renders it easy to promote the bleeding after it comes off, as long as necessary, with figure, so large as to answer every purpose, and at the same time so small, as not to occasion terror or disgust, added to which, the very easy and simple method of keeping them, all are the most striking proofs of the care of a kind indulgent Providence, providing relief for his afflicted creatures.

SECTION

SECTION IV.

OF THE CASES WHEREIN LEECHES ARE APPLIED.

I COME in this section to treat on the most useful part of man's acquaintance with leeches, that of knowing the various cases in which they may be employed with the happiest effect, and as children require more the use of leeches than adults, I shall speak of them first. Infants and young children are subject to a variety of inflammations and swellings, arising from a variety of causes, but as those arising from the dregs of the small-pox appear to be the most affecting and pernicious. I shall first, enter upon a discussion of those, and observe, the same rules which will be given with respect to the management and cure of those tumours (wherein leeches have a principle share), will suffice for the rest. Those tumours or abscesses attack children a few days after the small-pox, and happens to those children in particular, who are of too weak stamina to impel, or produce a sufficient determination to the skin, of the morbid matter during maturation, whereby the habit remains saturated with the dregs of the small-pox, which being hostile to nature, she endeavours to expel the foe by collecting the remains of the loathsome malady by the formation of those swellings under consideration, other reasons are their having a cruel kind, which wasted and debilitated the frame, added to which, are parents and those who have

have the care of children, neglecting to administer physic in proper time, small-pox patients should have the first dose of physic three days after they begin to turn, and to be repeated every other morning for three times, in general they require a repetition of these three doses a week after the last dose is given. The same remarks are applicable to adults, as well as children; the physic ought to be prepared by some apothecary, with calomel in each according to the age and constitution of the patients.

Those swellings generally appear in the joints; first they look pale and white, but unless prevented, in a few days assume a red and inflamed aspect, which would shortly terminate in abscess.

Those swellings are particularly to be dreaded, as they often corrupt and destroy the ligaments which unite the joints, thereby occasioning perpetual lameness, should the patient recover. Upon the first appearance of those tumours, you must throw an active purge into the patient, if strength will admit of it; let the swelling at the same time be fomented with the following:—Take of camomile flowers, one handful; two poppy-heads, a few bay and marshmallow leaves; break the poppy-heads into small pieces, and boil all together for fifteen minutes, in a pint and a half of water, strain the liquid from the herbs, and with hot flannels foment. For the sake of those unacquainted with the method of fomentation, I subjoin the following instructions. Procure two pieces of flannel large enough to cover the swelled part, dip them into your hot liquid, wring one of them out and apply it to the swelled part as warm as the patient can bear it, when it cools upon the part, wring the

the other out and apply it, immerse the former in the liquor again to be ready to put on upon the taking off the second, and so continue applying them alternately till your liquor grows cool; when the fomentation is done, cover the part rather warm for half an hour, then rub with a flesh brush or calico cloth for a few minutes, and immediately apply a leech or two, according to the size of the swelling, which put on and treat as hereafter directed, when the bleeding is done put on the following poultice. Take crumb of white bread, Goulard's lotion a sufficient quantity, mix and make a poultice, which apply a little warm, renew the poultice every six hours, fomenting every other time of putting on the poultice. The following day if the swelling or redness does not seem to subside, apply another leech and give another purge, if the strength of the patient can admit of it:— on the third day omit the leech and purge, and only continue the poultice, on the fourth day the leech and purge may be again repeated if necessary; on the fifth day if you perceive evident symptoms of the tumours going away continue your poultice till it is quite gone, and in the mean time give three doses of purging medicine, one every other day, as before hinted; but if, on the contrary, the swelling instead of subsiding, seems to increase, accompanied with redness and pain upon pressure, you may suspect matter forming, and all means will be ineffectual to repel it, therefore cease applying leeches, or to administer purging medicines, only foment twice a day, and put on a common bread and milk poultice, to forward maturation, when the swelling has broke, it may be healed in the ordinary way, when almost healed you must compleat the business by administering three doses

doses of physic, at the distance of two days between each dose; the same remarks are applicable to the various kinds of tumified swellings.

Having expatiated a little upon the use of the leech as a means employed against gatherings or abscesses, which infants and children are the subjects of (for one rule is applicable to the whole number). I shall now take notice of those inward diseases of children, wherein the use of leeches are peculiarly great. Inflammation of the lungs is what children are frequently the unhappy subjects of, than which no malady with which they are afflicted is more threatening in its nature, or oftener fatal to them.

This malady is known by their quick and laborous respiration, high fever, much thirst, a total rejection of food, the eyes appear much sunk, the cheeks of a florid redness, while the rest of the face exhibit a very fallow aspect; it is also frequently attended with a cough, and often convulsions. Let a leech be applied to the pit of the stomach, and give the following: — Take almond milk three ounces, nitre, one scruple; syrup of Tolu, two drams; mix, and give a pap spoonful every two hours. When the bleeding has ceased, apply a blister over the part where the leech was applied, which must remain twenty-four hours, before it is dressed; the body must be kept gently open: if, on the second day, the violence of the complaint is not much abated, apply a leech to each arm, were the lancet is in general used; the blister may also be kept open for a few days, and the mixture continued.

In

In the whooping cough they are singularly serviceable, applied to the pit of the stomach; in violent coughs and colds of the common kind, where the little patient is almost suffocated with phlegm, they are eminently beneficial, applied either to the breast or arm.

Inflammatory fevers in general are much relieved by their agency. Adult persons, in cases of local inflammation, will find their use attended with the most salutary effects. In swellings of the abscess kind, they may be employed with the best service, in the same manner as directed for children. Head-achs, in particular of the plethoric species, receive the most instantaneous, effectual and permanent relief, applied to the temples, two, four, or six, according to the violence of the complaint. In contusions where the blood gets extravasated, turns black, and would quickly issue in inflammation, the use of leeches are particularly great.

A very slight blow upon the nose, or any part of the face near the eyes, will frequently occasion a blackness about the eyes, not easily removed when suffered to remain any time, and the confusion of face which attend such an event, is more easily conceived than expressed, without a doubt, the best method of removing such a reproachful appearance is to apply one or two leeches to the blackened part, which will draw off the extravasated blood, and thereby soon restore the part to its former healthy appearance.

To speak more generally, wherever local blood-letting is wanted, the administration of leeches is attended with

with great success. They may be applied with safety and success, were the lancet cannot be employed; inflammation outwardly which is confined to a particular spot, as also black settlements of the blood from bruises, were perhaps, there is no blood vessel near, of any magnitude, but the whole number affected are capillary vessels, these useful creatures collect and absorb the obstructed humours, thereby giving free circulation to the neighbouring fluids, thus carry off the complaint.

In short, throughout the course of an extensive practice, I have found them so extremely useful and beneficial, that I really own I cannot sufficiently acknowledge, how much I am indebted to their agency, how difficult it would be for me to dispense with them, and were, or in what I could find a substitute for them, and I lament that they are not more understood by people in general.

SECTION

SECTION V.

OF THE METHOD OF APPLYING LEECHES.

I COME in this fifth and last section to expatiate on the most proper and effectual mode of applying the leech, respecting which, people in general are not more ignorant of the true nature, properties, and use of this creature, than they are in not knowing how to apply them when needed: I have often been grieved to see the perplexity of persons in this respect, into whose hands leeches have been put for the purpose of administration, even medical practitioners (in general) themselves are either ignorant of the best method of applying them, or else are chargeable with great neglect, in not informing their patients (when they advise leeches) how to put them on; I have often known people use every effort in their power for an hour or upwards, in order to get leeches to take, without being able to accomplish their purpose; besides frequently so debilitating the leeches as to render them unfit for use, and frequently killing them. The way most are instructed to apply them is, to place them under a wine glass, or some other vessel, and lay them over the part where they are required to be applied; this is the common method made use of, whereas they are frequently so tardy that they will stick about the glass or other vessel, without attempting to attack

D

the

the skin. If they should chance to crawl under the vessel which confines them, and attach themselves to the body, and this but seldom happens after a tedious time, most likely the attachment will be so distant from the precise spot upon which they are wanted to fix, as to render them of no effect; this I have frequently remarked to be the case when they have thus been applied to swellings, having missed the centre thereof, no reduction of the part has taken place, untill they have been reapplied to the exact spot required, when the most salutary effects has been presently experienced.— Other modes of applying them are made use of, but being equally bad, I shall not trouble the reader by noticing them. The mode which I have found by copious experience, to be infinitely the best (being attended with quickness, certainty, and efficacy), is as follows. Let the part be first carefully washed clean, with warm milk and water, if very dirty and require it, a little soap may also be used; when the part is thus washed and wiped dry, rub over the part a little milk, then see that your leech is wiped dry with a smooth cloth, which being done, take it with your fingers by the middle, and apply its mouth to the very spot you wish, you will, perhaps, find it, at first, twist and extend itself in your fingers, and then wish to attach itself to some contrary part, but as repeatedly as it extends itself around, or attempts to fix upon a wrong situation, you must as repeatedly draw it back and reapply it to the proper part, by so doing, you will find it will presently seize the precise spot wished for, when you find this you must not hastily let the leech go, for they will sometimes seem to seize the part with great avidity, and in a few seconds
let

let go their hold, but when you are convinced the leech has good hold, you may then let go, and leave it to its delightful employment. Adult persons can easily tell when the leech has thoroughly perforated the skin, by the acute bites they perseveringly repeat; and, though infants may not be able to articulate so as to describe the sensations they feel, their crying upon such occasions sufficiently demonstrate what they want powers of speech to tell, namely, that the creature has fulfilled the wish of the applicator, it may also be known by the quick action of the neck of the leech when engaged in drawing. If after accurately attending to the above rules, you cannot get the leech to fasten, which rarely happens, you may be assured the creature is under the influence of some ailment, in which case they never will take. I here find it necessary to remark, that the small end of the leech is the head, whereas, I have repeatedly observed, that the greater part of the people, from the tail of the leech being much broader than the head, mistake the one for the other, and thereby occasioned themselves a great deal of fruitless labour. When the animal has fastened himself he generally expands the tail, and sometimes attaches it very firmly to another part of the skin, but without the least pain to the part, this hold I have observed the leech does not quit till it is charged with blood, and then drops off all at once.

I have remarked the leech leaves a stain upon the skin, were its tail was fixed, which remained for a few days, but this is seldom the case, and generally the tail of the leech hangs careless while it is engaged in sucking. The time they require to saturate themselves with blood, is
various,

various, sometimes they will hang half an hour, and and seem busily engaged all the time. At other times, a quarter, and good healthy leeches will fill themselves in ten minutes, and drop off. When I have observed them to be tardy, and seemed to make little progress, I have gently stirred their lower parts, which was a cause of stimulating them to greater exertion. It sometimes happens that they would continue for hours, if suffered to remain, in such cases, I would advise to wait half an hour, and then if they did not seem disposed to come off, by a gentle touch, by no means forceably to pull them off, but lay a single grain of salt upon their heads, and they will immediately disengage themselves and drop off.

I would here observe that the quantity of blood the leech imbibes, is in general insufficient to answer the purpose, therefore, when the leech comes off, it is necessary to have a basin of warm water and a sponge or rag, to keep bathing the orifice, in order to encourage the bleeding for an hour or two: if the orifice seem disposed to bleed any longer than wished for, apply a piece of lint, three or four times double and bandage it up.

It sometimes happens, that when the blood imbibed is in a foul or putrid state, the leech will prematurely drop off and die; at other times, when the blood is not quite so corrupted, though they charge themselves with it, they will die in a few days, their body becoming knotty, which is a sure prelude to death.

For the sake of the timid and fearful, which are generally terrified at the sight of large leeches, thinking their bite must be much more terrible than that of the smaller ones ;

ones ; I have thought fit to mention, that singular as it may seem, it is a fact, that the orifice which the largest leeches make is not (in general) of a greater magnitude than those occasioned by the smaller. I recollect applying by much the largest leech which I had ever seen, to a man's cheek, for a swelling, from the first of its fixing he never felt it, and it drew so remarkable easy, that I could hardly persuade him it was applied ; it swelled itself to an enormous size in ten minutes, when it dropped off, leaving an orifice rather under the common size. It has been a very common practice among people when leeches have drawn, to sprinkle salt on them under the idea of its being necessary to purge them after their meal ; this idea is truly absurd, and generally so injurious to the leeches as to render them of no future use, and oftentimes to kill them. Those persons do not consider that blood is the most favourite and salutary nourishment of this extraordinary creature, and I would ask such inconsiderate persons how they would feel themselves, if, immediately after eating a hearty dinner, any person was to give them a violent emetic. When the leech has come off, handle it as little as possible, putting it immediately into clean water, which, if it fouls, alter it in the course of half an hour, when keep them as heretofore directed, by this means you may, if wanted, use them again.



MVSEVM
BRITAN
NICVM

X